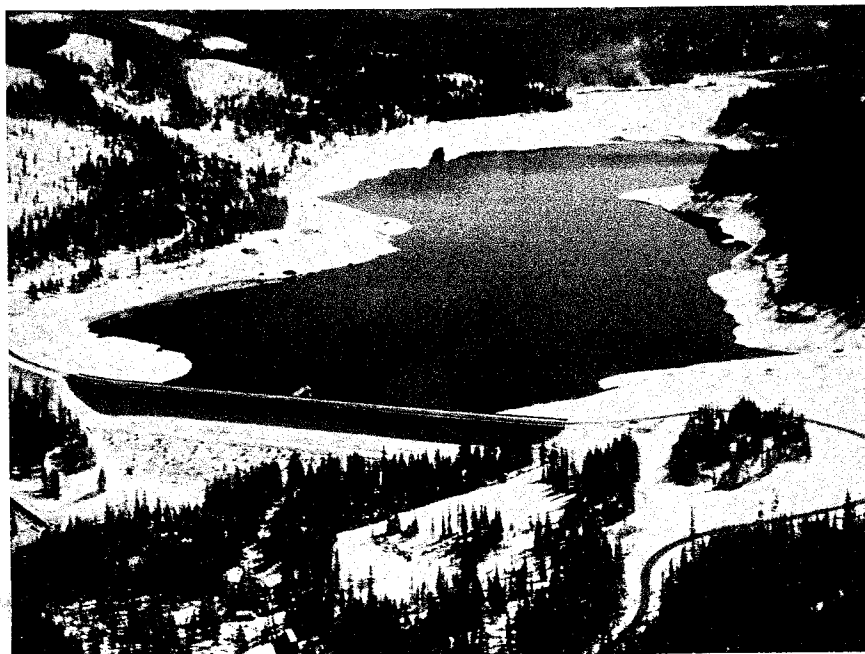


## Automated Instrumentation for Middle Creek Dam- Fact Sheet

The Department of Natural Resources and Conservation (DNRC) owns 24 high hazard dams. The term "high hazard" indicates there is the potential for loss of life below the dam should the dam fail. DNRC maintains a dam safety program at each dam that includes monthly monitoring of reservoir pool levels and embankment instrumentation during the irrigation season, and annual dam safety inspections. The intent of the program is to verify that each dam is performing adequately, and to identify any potential problems that may develop as early as possible. The reservoir pool level data is also used to manage reservoir operations. In the unlikely event that a dam failure should occur, DNRC has an Emergency Action Plan for each dam that specifies actions and available resources for emergency response personnel.

The purpose of this project is to enhance the current dam safety program at Middle Creek dam: (1) by installing an automated instrumentation system at the dam to improve the ability of DNRC to monitor and evaluate both reservoir operations and embankment performance, and (2) by evaluating the feasibility and cost of installing an early warning instrumentation system that would alert emergency response personnel in the event of a dam failure. Middle Creek Dam was selected due to its importance as a municipal water supply for Bozeman, the relatively large amount of development in the potential inundation zone, and the difficulty of accessing it during the winter months.

The funding in this request would be used to automate the existing instrumentation system at Middle Creek Dam, and to evaluate the feasibility of an early warning system. The Department is requesting a Renewable Resource grant in the amount of \$100,000. The State Water Projects Bureau will assume the lead role in project management, intending to contribute in-kind technical services amounting to approximately \$37,525. The estimated cost of this project is approximately \$137,525.



Middle Creek Dam



Satellite image of subdivisions at the mouth of Hyalite Canyon